

**Northwest Clean Air Agency (NWCAA) hereby issues
Order of Approval to Construct (OAC) 1283 - DRAFT**

Project Summary:

Construct and operate new boilers to provide steam for drying fir, hemlock and cedar in new kilns on leased land adjacent to the lumber manufacturing facility at 530 W Front Street in Sumas, WA.

Approved Emission Units:

- Three (3) Clayton model SE404 steam generator natural gas-fired boilers with low NOx burners, rated at 15.753 MMBtu/hr per boiler
- Eight (8) lumber drying kilns with maximum capacity of 1,048,000 board feet (total)

Owner/Operator	Facility Name and Location
The Teal-Jones Group 530 Front Street Sumas, WA 98295 Contact: Bob Lindstrom	Teal Jones Lumber Services, Inc. 530 Front Street Sumas, WA 98295

The effective date of this Order is the startup date of any steam generating boiler or any lumber drying kiln, whichever starts operating first.

Note that in addition to other applicable rules and regulations, one or more of the approved emission units are subject to applicable portions of the following federal regulations:

New Source Performance Standards (NSPS)

- 40 CFR 60 Subpart A - General Provisions
- 40 CFR 60 Subpart Dc - Standards of Performance for Small (10 – 100 MMBtu/hr) Industrial-Commercial-Institutional Steam Generating Units

Issuance of this Order is authorized by Northwest Clean Air Agency Regulation Section 300. The Owner/Operator must comply with the following restrictions and conditions¹:

Natural Gas-Fired Boilers

- (1) Do not emit visible emissions from the natural gas-fired boilers that exceed 0 percent

¹ Nothing in this permit is intended to, or shall, alter or waive any applicable law [including but not limited to defenses, entitlements, challenges or clarifications related to the Credible Evidence Rule, 62 FR 8315 (Feb. 27, 1997)] concerning the use of data for any purpose under the Act, generated by the reference method specified herein or otherwise.

Pursuant to Section 300.10 of the NWCAA Regulation and ch 43.21B RCW, this Order may be appealed to the Pollution Control Hearings Board (PCHB). To appeal to the PCHB, a written notice of appeal must be filed with the PCHB and a copy

opacity for more than three minutes in any one-hour period as measured by Washington Department of Ecology Method 9A.

- (2) Do not exceed any of the following emission limits from the boilers:
 - (A) 9 ppmvd NO_x, corrected to 3% O₂, and
 - (B) 50 ppmvd CO, corrected to 3% O₂.
- (3) Demonstrate compliance with Condition 2 of this Order, initially within 60 days of startup of the boilers and then at least every two years from the date of the previous test, by performing combustion analysis at high fire (90% load or greater) to measure emissions of NO_x and CO in accordance with the procedures specified in EPA Conditional Test Method (CTM)-034 from each boiler stack, utilizing a portable emissions analyzer, or other method approved in advance by NWCAA.

Maintain records of the results of each combustion analysis performed.

- (4) Develop a written operation and maintenance (O&M) manual for the boilers and low NO_x burners, including a schedule for burner tune-ups and adjustments to air-to-fuel ratio, boiler inspections, and other maintenance requirements and operating procedures recommended by the boiler and burner manufacturer(s). Record all maintenance activities performed on the boilers and burners.

Maintain the manual onsite and keep readily available for inspection by NWCAA personnel.

- (5) Within 30 days following the end of each calendar month, record the total natural gas combusted in the boilers for the previous month, in million standard cubic feet (10⁶ scf).

Lumber Drying Kilns

- (6) Only Hemlock, Fir and Cedar may be dried in the Kilns. Record the board feet, species, and drying start date for each batch of lumber dried in each kiln.
- (7) Do not dry more than 106 million board feet of lumber, total, in the kilns (combined), in any consecutive 12-months.
- (8) Within 30 days following the end of each calendar month, calculate:
 - (A) The total board feet of lumber dried during the previous month in all kilns (combined), and
 - (B) The consecutive 12-month rolling total board feet of lumber dried in all kilns (combined).

For any kiln batch cycle that starts at the end of one month and finishes in the next month, count the board feet towards the total in the month that the kiln batch cycle starts.

- (9) In any kiln, do not exceed a dry-bulb temperature of 200 °F.
- (10) Install, operate and maintain a computerized steam management system that utilizes temperature sensors in the kilns (e.g., thermocouples).
- (11) Continuously monitor dry-bulb temperatures across each kiln for each batch of lumber dried

served upon the NWCAA within 30 days of the date the applicant receives this Order. Additional information regarding appeal procedures can be found at: <http://www.eluho.wa.gov/> under PCHB.

using devices accurate to within ± 1.8 °F. Record the maximum dry-bulb temperature measured in each kiln at least every 5 minutes of each lumber drying batch.

- (12) Recalibrate and replace temperature sensors (e.g., thermocouples) used to monitor kiln temperatures according to manufacturer specifications. Record the date each sensor is recalibrated and replaced, including the sensor's location within the kiln.
- (13) Do not emit visible emissions from the kilns that exceed 10 percent opacity for more than three minutes in any one-hour period as measured by Washington State Department of Ecology Method 9A.

General Requirements

- (14) Do not exceed the following emission limits from the kilns and boilers combined:
 - (A) 11,978 lb acetaldehyde per 12-month rolling total
 - (B) 168 lb formaldehyde per 12-month rolling total
 - (C) 170 lb acrolein per 12-month rolling total
- (15) Calculate emissions of each pollutant identified in Condition 14 based on thousand board feet of lumber dried in each kiln and million standard cubic feet of natural gas combusted in the boilers (combined), using the emission factors in Table 1 (below). For any kiln batch cycle that starts at the end of one month and finishes in the next month, count the emissions in the month that the kiln batch cycle starts. Report emissions to NWCAA when requested, unless otherwise specified or approved by NWCAA.

Within 30 days following the end of each calendar month, calculate and record:

- a. The monthly acetaldehyde emissions by totaling the acetaldehyde emissions from each kiln batch cycle.
- b. The monthly acrolein emissions by totaling the acrolein emissions from each kiln batch cycle.
- c. The monthly formaldehyde emissions by totaling the formaldehyde emissions for each kiln batch cycle and from operation of the boilers.
- d. The consecutive 12-month rolling total acetaldehyde, acrolein and formaldehyde emissions that include the previous month plus the prior 11 months.

TABLE 1. Emission Factors

Pollutant	Fir (lb/1,000 bf dried)	Hemlock (lb/1,000 bf dried)	Cedar (lb/1,000 bf dried)	Boilers (lb/10 ⁶ scf nat gas)
<i>Acetaldehyde</i>	0.057	0.113	0.0078	--
<i>Acrolein</i>	0.00065	0.0016	--	--
<i>Formaldehyde</i>	0.0010	0.0013	0.0013	0.075

- (16) Maintain all records required by this Order onsite for no less than 3 years from the date of generation and keep them readily available for review by NWCAA personnel.
- (17) Provide written notice to the NWCAA of the initial date of startup of each natural gas-fired boiler and each kiln. Postmark the notices no later than 15 days after startup and include a reference to OAC 1283.

Crystal Rau
Air Quality Scientist

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